

Work Order ID 136706

136706

Page 1

Wednesday, September 02, 2015 2:45:00 PM

Item ID: D4364-1

Accept

N900040100

Setup Start

NS1

Revision ID:

Stop

NS2

Item Name: Plate

Start Date: 9/1/2015 Start Qty: 2.00

**

6

Cust Item ID:

Required Date: 9/1/2015 Req'd Qty: 2.00

**

Customer:

Reference:

Approvals:

Process Plan: MLJ

Date: SEP 08 2015

Tooling:

Date:

QC:

Date:

SPC (Y/N):

Date:

Run Start

NR1

Stop

NR2

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
Draw Nbr	Revision Nbr								
D4364	B								
100		0.00							
100									
Waterjet	Memo	0.00							
FLOW CNC Waterjet	1-Cut as per Dwg (D4364-1)								
	Dwg Rev: <u>B</u>								
	Prog Rev: <u>B</u>								
	2-Deburr if necessary								
110	QC2- Inspect parts off machine FAI/FAIB	0.00							
110									
QC	Memo	0.00							
Quality Control									

6

09/15/2015

6

09/15/2015

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____		DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐		AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐					
Date :		Step #:		QTY Effective :			MRB (QSI042) Approval		
Description Work Order Deviation				Disposition				Completed By	
								Lead hand / Supervisor Approval Verification	
Root Cause		FAULT CATEGORY							
Environment ☐	No Re-verification ☐	Pressure/Forced ☐	Temperature/Cure ☐	Power Loss/Surge ☐	Positioned Wrong ☐				
Design ☐	Operator ☐	Bending ☐	Set-up ☐	Folio/Program ☐	Outside Dimensions ☐				
Doc/Data ☐	Offset/Setup ☐	Centre Not Concentric ☐	BOM/Route ☐	Grain ☐	Over/Under tolerance ☐				
Equip/Tooling ☐	Supplier ☐	Cracks ☐	Broken/Damage/Defect ☐	Weld ☐	Part Incorrect ☐				
Handling/Pre ☐	Training ☐	Crimp/Kink/Ripple/Wave ☐	Inspection Incomplete/Unqualified ☐	Wrong Stock Pulled ☐	Part Lost/Missing ☐				
Material ☐	Use for Testing ☐	Cuffs ☐	Contamination ☐	Out of Sequence ☐	Part Moved ☐				
Internal Transport ☐	Poor Information ☐	Crushing ☐	Countersink ☐	Off-set ☐	Drawing ☐				
Tribal Knowledge ☐	Rushing ☐	Heat Treat ☐	Cut Too Short ☐	Mislabeled ☐	Finish ☐				
LOA ☐	Product Improvement ☐	Wave/Twist in Tube ☐	Instructions Incomplete/Unclear ☐	Fit/Function ☐	Misread ☐				
Substation ☐	Process Improvement ☐	Marks/Chatter ☐	Drill Holes ☐	Misaligned/off center ☐	Turning Sequence ☐				
Past Expiry Date ☐	Manufacturing Process ☐	OTHER : _____							
Misidentified ☐	Past Due ☐								

Wednesday, September 02, 2015 2:45:00 PM

136706

Page 2

N900040100

Setup Start *NS1*

Stop *NS2*

Start Date: 9/1/2015 **Start Qty:** 2.00 ***2***

Cust Item ID:

Required Date: 9/1/2015 **Req'd Qty:** 2.00 ***~***

Customer:

Reference:

Run Start *NR1*

Approvals: **Process Plan:** _____ **Date:** _____ **Tooling:** _____ **Date:** _____

Stop *NR2*

QC: _____ Date: _____ SPC (Y/N): _____ Date: _____

**Insp.
Stamp**

0.00

120

OC

Memo

0.00

Quality Control

DAS
38
9-89

SEP 29 2013

0.00

130

Brake NC

Memo

0.00

Brake NC

*** Jigs DT8261 and DT8326.***

DAS
30
9-89

SEP 30 2010

0.00

140

QC

Memo

0.00

Quality Control

DAS
38
9-89

OCT 01 2015

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____		DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐		AGAINST DEPARTMENT/PROCESS <table style="width: 100%; border: none;"> <tr> <td style="width: 15%;">Skid-tube ☐</td> <td style="width: 15%;">Cross tube ☐</td> <td style="width: 15%;">Water Jet ☐</td> <td style="width: 15%;">Engineering ☐</td> </tr> <tr> <td>Machining ☐</td> <td>Small Fab ☐</td> <td>Prod. Eng. Coord. ☐</td> <td>Quality ☐</td> </tr> <tr> <td>Thermoforming ☐</td> <td>Finishing ☐</td> <td>Rec/Store/Packaging ☐</td> <td>Other ☐</td> </tr> <tr> <td>Large Fab ☐</td> <td>Composite ☐</td> <td>Supplier ☐</td> <td></td> </tr> </table>						Skid-tube ☐	Cross tube ☐	Water Jet ☐	Engineering ☐	Machining ☐	Small Fab ☐	Prod. Eng. Coord. ☐	Quality ☐	Thermoforming ☐	Finishing ☐	Rec/Store/Packaging ☐	Other ☐	Large Fab ☐	Composite ☐	Supplier ☐	
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Date :		Step #:		QTY Effective :			MRB (QSI042) Approval																		
Description Work Order Deviation				Disposition				Completed By																	
								Lead hand / Supervisor Approval Verification																	
								QC / QA Coordinator Approval																	
Root Cause		FAULT CATEGORY																							
Environment ☐	No Re-verification ☐	Pressure/Forced ☐	Temperature/Cure ☐	Power Loss/Surge ☐	Positioned Wrong ☐																				
Design ☐	Operator ☐	Bending ☐	Set-up ☐	Folio/Program ☐	Outside Dimensions ☐																				
Doc/Data ☐	Offset/Setup ☐	Centre Not Concentric ☐	BOM/Route ☐	Grain ☐	Over/Under tolerance ☐																				
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Past Expiry Date ☐	Manufacturing Process ☐																								
Misidentified ☐	Past Due ☐	OTHER : _____																							

Work Order ID 136706***136706***

Page 3

Wednesday, September 02, 2015 2:45:00 PM

Item ID: D4364-1

Accept

N900040100Setup Start ***NS1***

Revision ID:

Stop ***NS2***

Item Name: Plate

Start Date: 9/1/2015 Start Qty: 2.00

2

Cust Item ID:

Required Date: 9/1/2015 Req'd Qty: 2.00

2

Customer:

Reference:

Approvals: Process Plan: _____ Date: _____ Tooling: _____ Date: _____

Run Start ***NR1***

QC: _____ Date: _____ SPC (Y/N): _____ Date: _____

Stop ***NR2***Sequence ID/
Work Center IDOperation
DescriptionSet Up/
Run Hours

Tool ID

Tool #

Plan
CodeAccept
QtyReject
QtyReject
NumberInsp.
Stamp

200

Identify as per dwg & Stock Location: W/AW

0.00

200

Packaging

Memo

0.00

Packaging

LOCATION: WA002

210

QC21- Final Inspection - Work Order Release

0.00

210

QC

Memo

0.00

Quality Control

6 EL / 5-10-1MLS OCT 01 2015MLS OCT 01 2015

DQA: _____ Date: _____

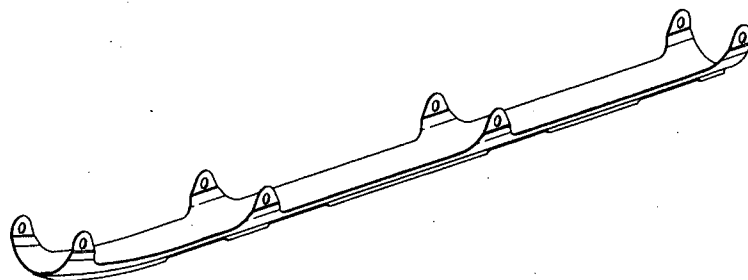


WORK ORDER NON-CONFORMANCE / UPDATE

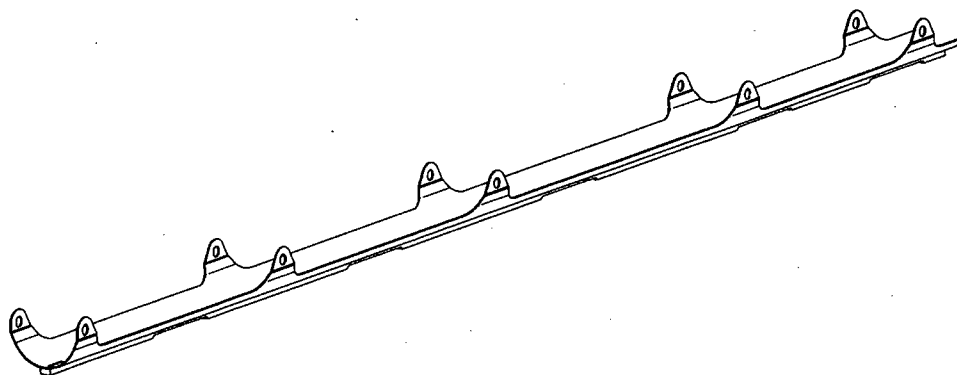
QA Closed: _____ Date: _____

Work Order update only ☐

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Large Fab ☐	Composite ☐	Supplier ☐																							
Date :		Step #:		QTY Effective :			MRB (QS1042) Approval																		
Description Work Order Deviation				Disposition			Completed By																		
Root Cause				FAULT CATEGORY																					
Environment ☐	☐	No Re-verification	☐	Pressure/Forced	☐	Temperature/Cure	☐	Power Loss/Surge	☐	Positioned Wrong															
Design ☐	☐	Operator	☐	Bending	☐	Set-up	☐	Folio/Program	☐	Outside Dimensions															
Doc/Data ☐	☐	Offset/Setup	☐	Centre Not Concentric	☐	BOM/Route	☐	Grain	☐	Over/Under tolerance															
Equip/Tooling ☐	☐	Supplier	☐	Cracks	☐	Broken/Damage/Defect	☐	Weld	☐	Part Incorrect															
Handling/Pre ☐	☐	Training	☐	Crimp/Kink/Ripple/Wave	☐	Inspection Incomplete/Unqualified	☐	Wrong Stock Pulled	☐	Part Lost/Missing															
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Tribal Knowledge ☐	☐	Rushing	☐	Heat Treat	☐	Cut Too Short	☐	Mislabeled	☐	Finish															
LOA ☐	☐	Product Improvement	☐	Wave/Twist in Tube	☐	Instructions Incomplete/Unclear	☐	Fit/Function	☐	Misread															
Substation ☐	☐	Process Improvement	☐	Marks/Chatter	☐	Drill Holes	☐	Misaligned/off center	☐	Turning Sequence															
Past Expiry Date ☐	☐	Manufacturing Process	☐	OTHER :																					
Misidentified ☐	☐	Past Due	☐																						



D4364-041 FWD WEARPLATE ASSY



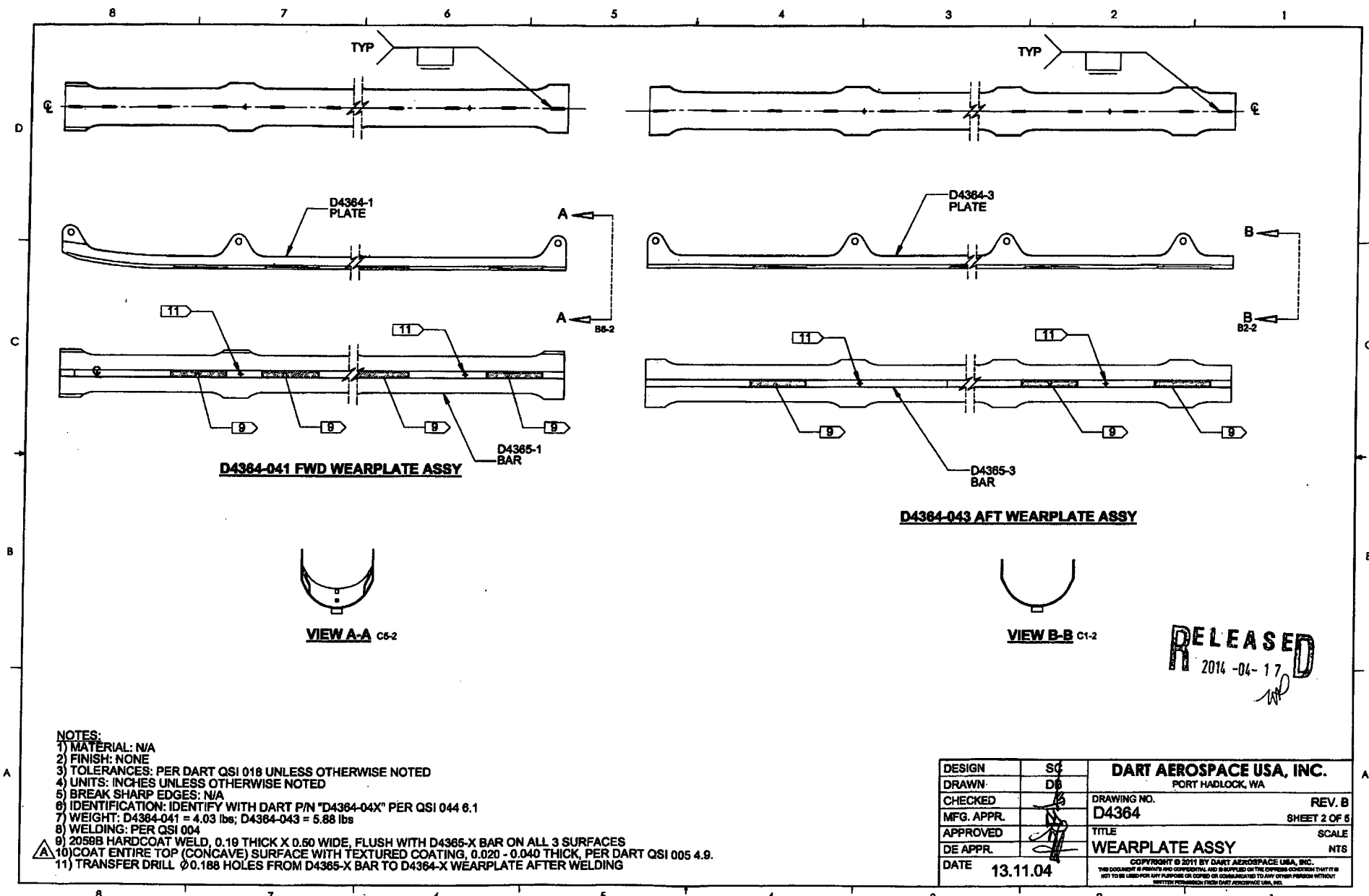
D4364-043 AFT WEARPLATE ASSY

ITEM	QTY -041	QTY -043	PART NUMBER	DESCRIPTION
	X		D4364-041	FWD WEARPLATE ASSY
		X	D4364-043	AFT WEARPLATE ASSY
1	1		D4364-1	PLATE
2		1	D4364-3	PLATE
3	1		D4365-1	BAR
4		1	D4365-3	BAR
5	A/R	A/R	2059B	HARDCOAT
6	A/R	A/R	TEXTURED COATING	SEALANT

SHOP COPY
RETURN TO
ENGINEERING
UNCONTROLLED COPY
SUBJECT TO AMENDMENT
WITHOUT NOTICE
WORK ORDER
NO. 136706 MW
150908

RELEASED
2014-04-17
mo

B	TEXTURED COATING WAS ROCKGUARD 4714 (BOM TABLE), CHANGE NOTE TO (SH 2)	DB	13.11.04
A	NEW ISSUE	SC	11.08.14
REV.	DESCRIPTION	BY	DATE
DESIGN	SC	DART AEROSPACE USA, INC. PORT HADLOCK, WA	
DRAWN	DB		
CHECKED	<i>[Signature]</i>	DRAWING NO.	REV. B
MFG. APPR.	<i>[Signature]</i>	D4364	SHEET 1 OF 5
APPROVED	<i>[Signature]</i>	TITLE	SCALE
DE APPR.	<i>[Signature]</i>	WEARPLATE ASSY	NTS
DATE	13.11.04	COPYRIGHT © 2011 BY DART AEROSPACE USA, INC. THIS DOCUMENT IS PRIVATE AND CONFIDENTIAL AND IS SUPPLIED ON THE EXPRESS CONDITION THAT IT IS NOT TO BE USED FOR ANY PURPOSE OR COPIED OR COMMUNICATED TO ANY OTHER PERSON WITHOUT WRITTEN PERMISSION FROM DART AEROSPACE USA, INC.	

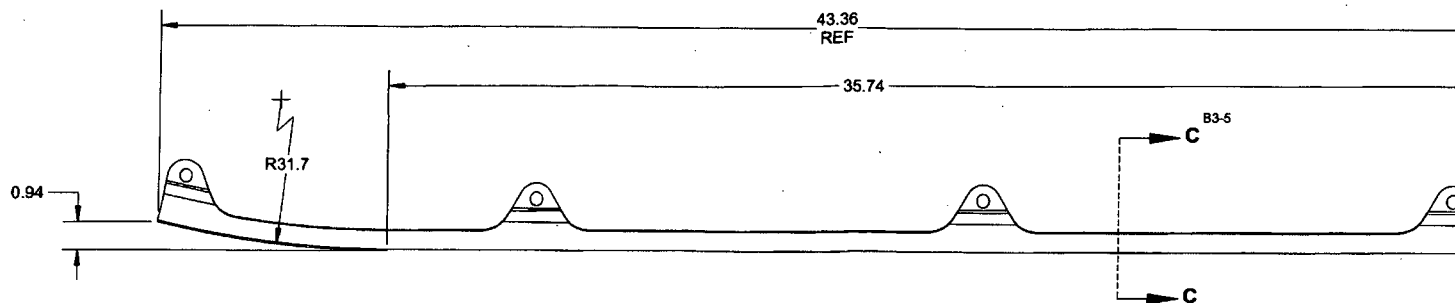


RELEASED
2014-04-17

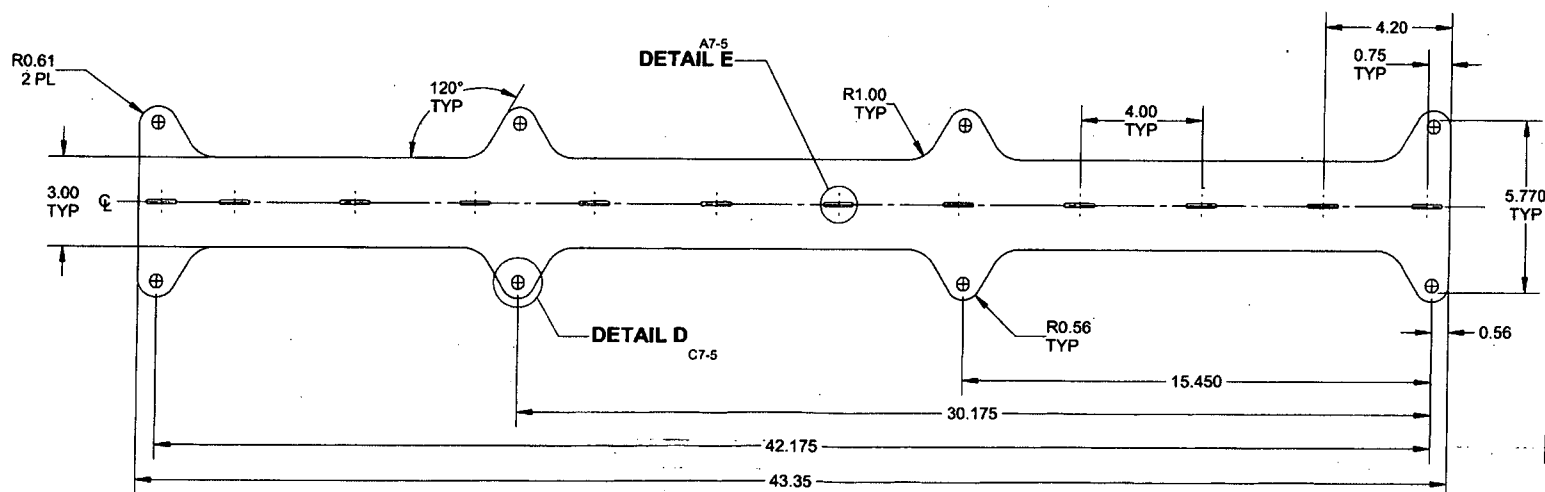
- NOTES:**
- 1) MATERIAL: N/A
 - 2) FINISH: NONE
 - 3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
 - 4) UNITS: INCHES UNLESS OTHERWISE NOTED
 - 5) BREAK SHARP EDGES: N/A
 - 6) IDENTIFICATION: IDENTIFY WITH DART P/N "D4364-04X" PER QSI 044 6.1
 - 7) WEIGHT: D4364-041 = 4.03 lbs; D4364-043 = 5.88 lbs
 - 8) WELDING: PER QSI 004
 - 9) 2059B HARDCOAT WELD, 0.19 THICK X 0.50 WIDE, FLUSH WITH D4365-X BAR ON ALL 3 SURFACES
 - 10) COAT ENTIRE TOP (CONCAVE) SURFACE WITH TEXTURED COATING, 0.020 - 0.040 THICK, PER DART QSI 005 4.9.
 - 11) TRANSFER DRILL Ø0.188 HOLES FROM D4365-X BAR TO D4364-X WEARPLATE AFTER WELDING

DESIGN	SC	DART AEROSPACE USA, INC. PORT HADLOCK, WA	
DRAWN	DB		
CHECKED	DB	DRAWING NO. D4364	REV. B
MFG. APPR.	DB	SHEET 2 OF 5	
APPROVED	DB	TITLE	SCALE
DE APPR.	DB	WEARPLATE ASSY	NTS
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8 7 6 5 4 3 2 1



D4364-1 PLATE
(MAKE FROM D4364-1F)



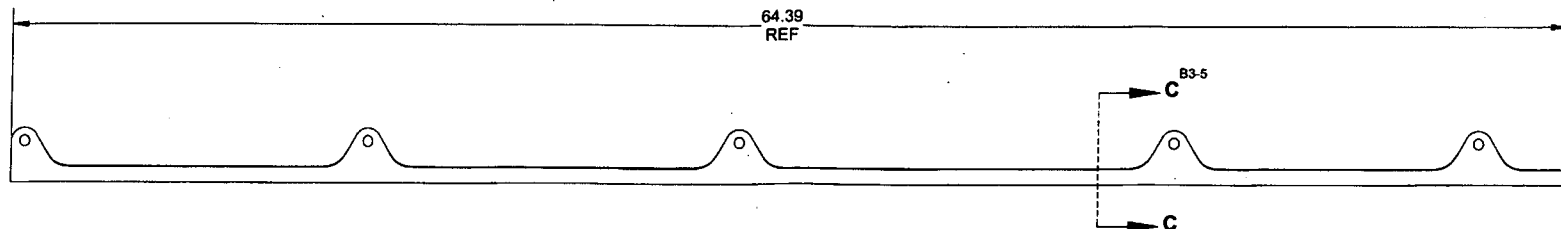
D4364-1F PLATE

RELEASED
2014-04-17

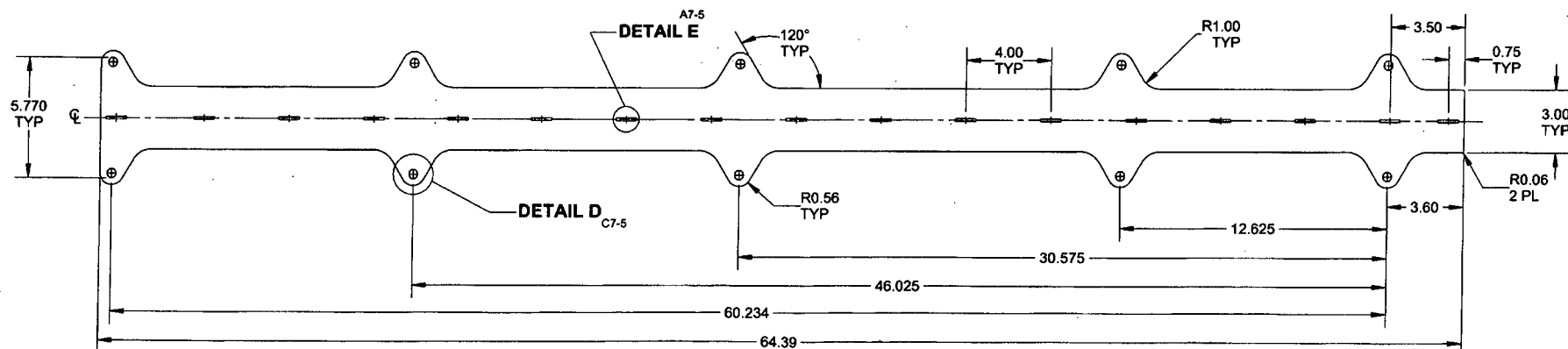
- NOTES:**
- 1) MATERIAL: AISI 304/316 STAINLESS STEEL SHEET PER AMS 5513 OR 5524 OR ASTM A240 OR ASME SA240 18 GAUGE (0.050 THICK), REF. DART SPEC. M304S18GA
 - 2) FINISH: NONE
 - 3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
 - 4) UNITS: INCHES UNLESS OTHERWISE NOTED
 - 5) BREAK SHARP EDGES: 0.005 TO 0.010 MAX
 - 6) IDENTIFICATION: N/A
 - 7) WEIGHT: 2.12 lbs

DESIGN	SC	DART AEROSPACE USA, INC.	
DRAWN	DB	PORT HADLOCK, WA	
CHECKED		DRAWING NO.	REV. B
MFG. APPR.		D4364	SHEET 3 OF 5
APPROVED		TITLE	SCALE
DE APPR.		WEARPLATE ASSY	NTS
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8 7 6 5 4 3 2 1



D4364-3 PLATE
(MAKE FROM D4364-3F)



D4364-3F PLATE

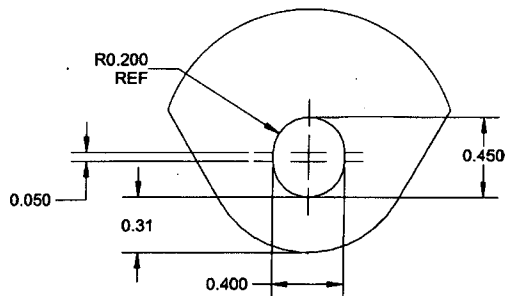
RELEASED
2014-04-17

NOTES:

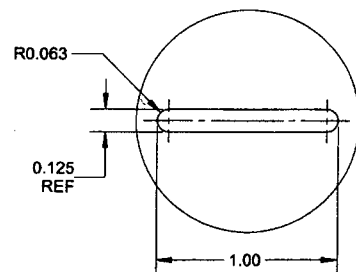
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- 2) FINISH: NONE
- 3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
- 4) UNITS: INCHES UNLESS OTHERWISE NOTED
- 5) BREAK SHARP EDGES: 0.005 TO 0.010 MAX
- 6) IDENTIFICATION: N/A
- 7) WEIGHT: 3.10 lbs

DESIGN	SC	DART AEROSPACE USA, INC.	
DRAWN	DB	FORT HADLOCK, WA	
CHECKED		DRAWING NO.	REV. B
MFG. APPR.		D4364	SHEET 4 OF 5
APPROVED		TITLE	SCALE
DE APPR.		WEARPLATE ASSY	NTS
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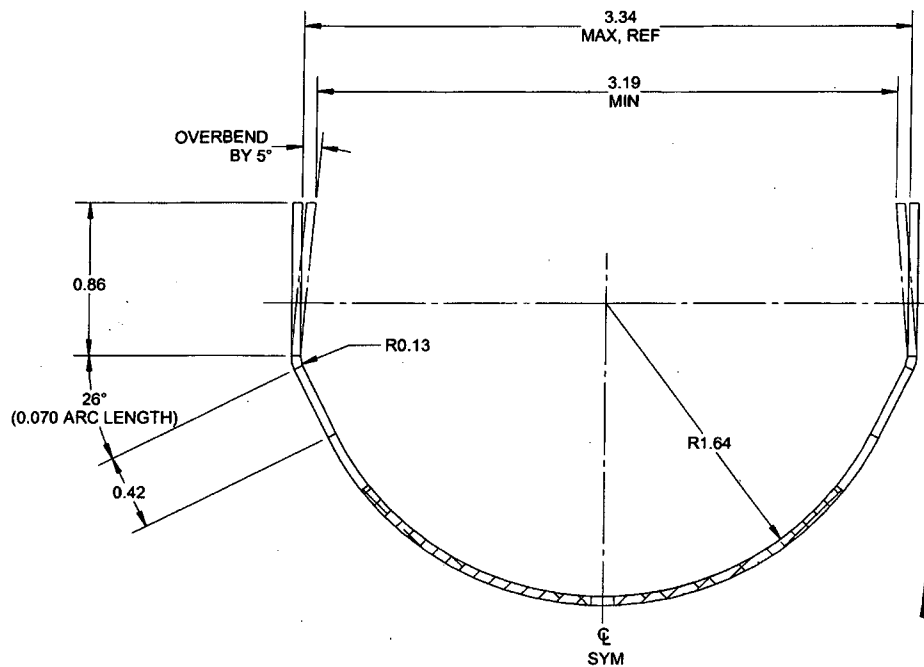
8 7 6 5 4 3 2 1



DETAIL D
SLOT DETAIL TYP
B5-3
B5-4



DETAIL E
SLOT DETAIL TYP
C5-3
C5-4



SECTION C-C
D3-3
D3-4

RELEASED
2014-04-17

DESIGN	SC	DART AEROSPACE USA, INC.	
DRAWN	DB	PORT HADLOCK, WA	
CHECKED		DRAWING NO. D4364	REV. B
MFG. APPR.		TITLE	SHEET 5 OF 5
APPROVED		WEARPLATE ASSY	SCALE
DE APPR.			NTS
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